TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2017-05-29-08** **Date: 31-05-17**
Customer	:	Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address	:	Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name	:	Providing and Fixing Sign Boards in Hegadenagara Ward No.06 Byatrayanapura Sub Division.
Agency	:	M/s Executive Engineer, KRIDL, Bangalore.
Customer's Reference	:	BBMP/EE/BTP/45/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	29-05-17
Sample ID No	:	2017-05-29-08-01
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	30-05-17

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	2.65	_
2	Finess by Air permeablity method (m^2/kg, Min)	249.5	225m^2/kg, Min
3	Density (gm/cc)	3.24	_
4	Standard Consistency (%)	28.5%	Not specified
5	Initial Setting time	165 minutes	Not less than 30 minutes
6	Final Setting time	275 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1mm	Not more than 10 mm

Note:

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

Any correction in the report will make this report invalid

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Samples will be disposed after 30 days from the date of issue of test certificate

AE ward No 6
Assistant Executive Engineer
Byatarayanapura Sub Division
B.B.M.P Bangalore-560026

CIVIL PRO Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

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HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL |
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4, 7TH MAIN MALLESWARAM, BANGALORE -3
Certificate No.: T- 4358

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2017-05-29-08** **Date: 27-06-17**
Customer	:	Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address	:	Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name	:	Providing and Fixing Sign Boards in Hegadenagara Ward No.06 Byatrayanapura Sub Division.
Agency	:	M/s Executive Engineer, KRIDL, Bangalore.
Customer's Reference	:	BBMP/EE/BTP/45/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	29-05-17
Sample ID No	:	2017-05-29-08-01
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	30-05-17

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	37.5N/mm^2	Not less than 37 N/mm^2
3	28 Days	55.5N/mm^2	Not less than 53 N/mm^2

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-05-29-08** **Date: 01-06-17**
Customer	:	Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address	:	Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name	:	Providing and Fixing Sign Boards in Hegadenagara Ward No.06 Byatrayanapura Sub Division.
Agency	:	M/s Executive Engineer, KRIDL, Bangalore.
Customer's Reference	:	BBMP/EE/BTP/45/2017-18
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	29-05-17
Sample ID No	:	2017-05-29-08-02(a)
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	29-05-17

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	254	254	1.7	98.3	90-100
3	20 mm	5436	5690	37.9	62.1	30-70
4	10 mm	4355	10045	67.0	33.0	10-35
5	4.75 mm	4577	14622	97.5	2.5	0-5
6	Pan	378	15000	100.0	0	---

AE ward No 6

Assistant Executive Engineer
Byatarayanapura Sub Division
BBMP Bangalore-560024

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2017-05-29-08** **Date: 01-06-17**

Sample ID No : 2017-05-29-08-02(a)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.8	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.6	
3	Specific Gravity	2.67	_
4	Bulk Density(Loose) (Kg/l)	1.53	_
5	Bulk Density(Compacted) (Kg/l)	1.57	_
6	Water Absorption(%)	0.22	_

Note:

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Quality Manager

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-05-29-08** **Date: 01-06-17**
Customer	:	Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address	:	Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name	:	Providing and Fixing Sign Boards in Hegadenagara Ward No.06 Byatrayanapura Sub Division.
Agency	:	M/s Executive Engineer, KRIDL, Bangalore.
Customer Reference	:	BBMP/EE/BTP/45/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	29-05-17
Sample ID No	:	2017-05-29-08-02(b)
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	29-05-17

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	243	243	4.9	95.1	90-100
3	10 mm	2655	2898	58.0	42.0	25-55
4	4.75 mm	1776	4674	93.5	6.5	0-10
5	Pan	326	5000	100	0	–

AE ward No 6

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2017-05-29-08** **Date: 01-06-17**

Sample ID No : 2017-05-29-08-02(b)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	**13.2**	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	**12.6**	
3	Specific Gravity	**2.66**	_
4	Bulk Density(Loose) (Kg/l)	**1.49**	_
5	Bulk Density(Compacted) (Kg/l)	**1.55**	_
6	Water Absorption(%)	**0.25**	_
7	Aggregate crushing Value(%)	**23.5**	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	**22.8**	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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AE ward No 6
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TEST REPORT OF FINE AGGREGATE

Lab ID	:	**CP-2017-05-29-08** **Date: 01-06-17**
Customer	:	Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address	:	Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name	:	Providing and Fixing Sign Boards in Hegadenagara Ward No.06 Byatrayanapura Sub Division.
Agency	:	M/s Executive Engineer, KRIDL, Bangalore.
Customer's Reference	:	BBMP/EE/BTP/45/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	29-05-17
Sample ID No	:	2017-05-29-08-03
Sample Type	:	Fine Aggregate
Reference to BIS codes	:	IS 383 : 2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	29-05-17
Total weight taken	:	1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	82	82	8.2	91.8	90-100	90-100	90-100	95-100
3	2.36 mm	156	238	23.8	76.2	60-95	75-100	85-100	95-100
4	1.18 mm	166	404	40.4	59.6	30-70	55-90	75-100	90-100
5	600 micron	176	580	58.0	42.0	15-34	35-59	60-79	80-100
6	300 micron	188	768	76.8	23.2	5-20	8-30	12-40	15-50
7	150 micron	143	911	91.1	8.9	0-10	0-10	0-10	0-15
8	Pan	89	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

AE Ward No 6

Assistant Executive Engineer
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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2017-05-29-08** **Date: 01-06-17**

Sample ID No : 2017-05-29-08-03

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.65	_
2	Specific Gravity	2.55	_
3	Material finer than 75 micron(%)	4.8	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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